

Foreign Currency Exposure: Hedging options

Michelle Augustine

As an U.S. Corporation you have exposure to foreign currencies even if your company is not selling or manufacturing outside the United States.

Introduction

I am an investment consultant to an investment advisor firm that manages money for corporate pension plans. In this position I have the opportunity to meet corporate executives on a regular basis. It was at a meeting with the CFO of a local corporation that the conversation turned to the question of whether this company should continue to manufacture its product here or should they look overseas. This particular company was thinking about moving its manufacturing plant to Mexico. Having just finished a class work for my Doctorate in Finance at NOVA Southeastern University. I had the opportunity to take a class taught by an adjunct professor on international finance. This professor was a full time professor at the University of Southern California, he also provided consulting services to major international companies through the Boston Consulting Group, Inc.

While sitting in this meeting with the CFO I was reminded of a statement the professor made in class one day, which struck me as most profound and insightful. He said that as a corporation in the business of manufacturing a product in the United States you have currency risk or exposure whether you realized it or not. Because in today's competitive environment if as a corporation you are not manufacturing in the most economical environment, your competition will and this will give them a competitive advantage that will ultimately cause you to go out of business.

Having established the premise that as a corporation you might possibly start looking overseas to manufacture your product, one of the most talked about concerns is the exposure to fluctuating currencies. There have been well publicized articles and stories about corporations that have lost thousands and millions of dollars due to fluctuations in currencies, Gibson Greeting Cards, \$20 million, Barings Bank, \$1.3 billion,

Metallgesellschaft, \$1.2 billion and many more. These losses have been contributed to ego, greed and miscalculation, not the effectiveness of a currency hedge.

Before I started consulting with the investment advisor, I was the manager for the investment division for one of the largest banks in Colorado. In addition to managing the investment division, I also co-managed the bank's \$800 million dollar investment portfolio. Having trading authorization for myself of up to \$25 million and \$10 million per trader in the division, one of the first things I requested was a meeting with the Board of Directors. I was asked to speak at the next board meeting about hedging my trading accounts. I spent weeks preparing for this meeting with charts, analysis and examples of hedging techniques, etc. Much to my surprise as soon as the word hedging came out of my mouth I saw the eyes of most of the board members glass over. As hard as I tried to explain to them that having millions of dollars in my trading accounts without the ability to hedge this position was riskier than not hedging, my argument fell on deaf ears. Hedging has had many negative connotations attached to it.

History of Hedging

The Japanese to hedge against the price of rice developed the initial concept of hedging over 300 years ago. Mr. Munhisa Momma born in 1724 amassed a huge fortune hedging the price of rice during the 1700's. Today trillions of dollars in the currencies trade everyday in markets around the world. The currency markets are considered to be one of the most efficient markets.

Methods

When evaluating whether to move a manufacturing plant overseas there are two basic methods used. The first method is the discounting of foreign currency cash flows at the foreign currency discount rate, or the second method, discounting foreign currency cash flows converted to the domestic currency at the domestic discount rate.

In addition to analyzing the cash flows there are some unique challenges in evaluating overseas projects. Tax codes are very different in each country. The United States tax's companies on income from all of the countries in which that company do business. While the payment of foreign taxes can be claimed as a credit against taxes in the United States, if the foreign countries tax

rates are lower than the United States, corporations pay taxes at the higher U.S. tax rate.

Another consideration in evaluating an overseas project is the necessity to understand different accounting standards in the two countries. Valuations, depreciations and basic accounting standards are usually very different overseas than in the United States. While corporations wishing to adhere to generally accepted accounting standards are becoming widespread worldwide, we are not there yet.

Obviously there are currency conversion risks. The two basic methods for evaluating the currency risks are with the use of the future rate method or the spot rate method. The future rate method uses the future exchange rates translated from the foreign currency futures prices converted into the domestic currency then discounted with the domestic discount rates. The spot rate method discounts the foreign currency cash flows using the foreign currency's discount rate, then converted into the present value using the domestic currency spot currency rate.

Political risk

Political risk can impact the cash flows into or out of the host country. All countries have some political risk, even the United States. Political risk can be as simple as price controls and employee wages to as severe as the host country condemnation of your manufacturing plant and the personal threat to your employees. There are several ways to account for political risk , the most widely uses method uses a risk premium to modify the discount rate. The risk premium used is not a quantitative rate but more of a qualitative method. While hedging can minimize against small fluctuations in currency rates, hedging does not protect the company against unanticipated changes or severe changes in exchange rates.

In addition to the political and currency risks other risks such as termination values and earned versus remitted cash flows should be considered. Any project should first be evaluated on a stand-alone basis, this will show the true value of expanding overseas and whether this adds additional value to the stakeholders.

While the above identified risks need careful consideration before expanding overseas, this article is about hedging your foreign exchange exposure once you have started operations

overseas. The impact of unanticipated changes in the currency fluctuations can have significant impact of the company's balance sheet and income statement.

Hedging cash flows

There are several methods of hedging your company's cash flows such as:

- Forward transactions
- Leading and Lagging
- Money Market hedges
- Currency invoicing clauses
- Prices Policies
- Factoring in the foreign or domestic currency
- Time drafts to take advantage of expected fluctuations
- Foreign Bank relations
- Compensating cash flows with other companies
- Currency Futures
- Currency Options
- Currency Swaps
- Netting between companies
- Re-invoicing through an invoicing center
- Currency Exchange warrants

The two principal methods of hedging for short term fluctuations of currency exposure are the forward markets and the money market concept. Futures and the options markets are also widely used and the information to evaluate the use of these instruments as a hedging tool is readily available.

Forward Contracts

Forward rates are usually set around the interest rate parity between countries. The interest rate parity is the difference in interest rates for like type of securities with maturity's of less than one year, taking into consideration the forward exchange rate discount or premium.

An example:

You can invest in Swiss Franc's for 30 days at 5.75% and borrow in the United States in dollars at 7.50%.

$$5.75\% - 7.50\% = 1.75\%$$

The spot market for Swiss Franc's is \$.6481/SF and the forward rate for Swiss Francs is \$.6494/SF.

$(.6494 - .6481) / .6481 = .00201$ x contract size of (1200) equals a 2.41% premium on the Swiss Franc.

Therefore as a company you would borrow at 7.50% in the United States, convert into Swiss Franc's at the spot rate of \$.6481/SF invest in a 30 day security at 5.75%, sell Swiss Francs forwards at the \$.6494/SF and receive a gain of .66%.

$$2.41\% - 1.75\% = .66\% \text{ gain.}$$

Of course this doesn't take into consideration transaction costs or slippage which would effect the return.

The forward hedge would be used when the company has an account receivable from a client who is going to pay in a foreign currency. The funds to fulfill the forward contract will be received when the foreign client makes the payments, therefore the hedge is covered.

Money Market Hedge

The money market hedge is based on quotations of forward rates by lending institutions based on the interest rate parity.

The money market hedge can also be used for account receivables, the difference is that the cost of the money market hedge is determined by the interest rate differential, where the cost of the forward rate hedge is a function of the forward rate quotes.

An example of a money market hedge would be if the company was expecting to receive a payment from a client in three months for \$1,000,000 in Swiss Francs. If the company can borrow money at 10% or 2.5% for the three months in the foreign country than:

$$1.025 \times \text{SF } \$1,000,000 = \text{SF } \$975,610.$$

The company would then convert the Swiss Francs into dollars at the spot rate of \$1.7640 or \$1,720,976 U.S. Dollars. Invest the \$1,720,976 in a short-term security at 6% annually or 1.5% for three months. Or use the loan proceeds for general operation of the company if its working capital cost of funds is higher than 7.68%.

$$\begin{aligned} \$1,720,976 * (1 + r) &= \$1,754,000 \\ r &= .0192 \end{aligned}$$

$$.0192 * (360/90) * 100 = 7.68\%$$

Conclusion

If a company decides that they want to leave the currency exposure unhedged, if the currency moves in the company's favor, leaving the currency exposed would have been to the company's benefit. But if the company's currency exposure moves against them, the amount of the loss could be significant, as the business entities above have realized.

As a company executive you have currency risk. If you are not producing or manufacturing in the lowest cost nation, and your competition is, you are exposed to currency risk. If your competition is paying their overseas employees less than you are, you have currency risk. If your competition is able to purchase materials overseas at favorable prices due to currency prices, you have currency risk. In today's worldwide economy, to stay competitive a company needs to take advantage of every opportunity to lower their costs, to increase margins and realize the saving that can come from doing business overseas. Currency fluctuations are a part of doing business overseas and hedging for these fluctuations can be successfully accomplished.

This article briefly described some of the hedging options and an example of how they are used. Before a company expands overseas they should gather as much information about that country, hedging techniques and the capital budgeting considerations for expansion. Hedging currency fluctuations is not as intimidating as it might initially appear most banks, brokerage firms and international consultants can advise you about your best options.

Michelle Augustine
P.O. Box 6785
Denver, CO 80206
(303) 471-9991
mpa@fp.edu